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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,317	03/30/2004	Masahiro Ikehara	925-288	1811

23117 7590 08/23/2005

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EXAMINER	
VY, HUNG T	

ART UNIT	PAPER NUMBER
2821	

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/812,317	IKEHARA ET AL.	
	Examiner	Art Unit	
	Hung T. Vy	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/30/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION
Specification

1. The specification has been checked to the extent necessary to determine the presence of possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-4 are rejected under 35 U. S. C. § 102 (e) as being anticipated by Komma et al., U.S. Pub. No. 2002/0097660.

With respect to claim 1, Komma et al. discloses semiconductor laser device comprising: a laser emission 100a, 100b part for emitting a laser beam; a

laser reception 800 part for receiving a backward beam of the laser beam reflected by an irradiation object 7; a polarization hologram 41,40 for transmitting the laser beam directed from the laser emission part to the irradiation object 7 as a forward beam without diffracting the beam, and diffracting a backward beam of the laser beam, which is a return beam of the forward beam that has been reflected by the irradiation object 7, so that the backward beam is deflected from a direction directed toward the laser emission part and further directed toward the laser reception part 800; and a three-beam diffraction grating 42 for dividing a holographic diffracted beam, which results from the diffraction of the backward beam by the polarization hologram 40,41, into three beams and for letting the beam incident on the laser reception part 7(See fig. 14).

With respect to claim 2, Komma et al. discloses the polarization hologram 40,41 and the three-beam diffraction grating 42 are integrated together (See fig. 14).

With respect to claim 3, Komma et al. discloses the three-beam diffraction grating 42 is so positioned that the forward beam directed from the laser emission part toward the irradiation object 7 is inhibited from being incident on the three-beam diffraction grating (See fig. 14).

With respect to claim 4, Komma et al. discloses the laser reception part includes a first photoreception 82 part fro receiving a + 1^{st} –order diffracted beam derived from the polarization hologram, and a second photoreception part 81 for receiving a -1^{st} –order diffracted beam derived from the polarization hologram 4 (See paragraph 0072).

4. Claims 1-3 are rejected under 35 U. S. C. § 102 (e) as being anticipated by Sakai et al., U.S. Pub. No. 2004/0156299.

With respect to claim 1, Sakai et al. discloses semiconductor laser device comprising: a laser emission 3 part for emitting a laser beam; a laser reception 4 part for receiving a backward beam of the laser beam reflected by an irradiation object; a polarization hologram 3 for transmitting the laser beam directed from the laser emission part to the irradiation object as a forward beam without diffracting the beam, and diffracting a backward beam of the laser beam, which is a return beam of the forward beam that has been reflected by the irradiation object , so that the backward beam is deflected from a direction directed toward the laser emission part and further directed toward the laser reception part 4; and a three-beam diffraction grating 8 for dividing a holographic diffracted beam (See paragraph 0106), which results from the diffraction of the backward beam by the polarization hologram 4,3, into three beams and for letting the beam incident on the laser reception part 4 (See fig. 1).

With respect to claim 2, Sakai et al. discloses the polarization hologram 4,3 and the three-beam diffraction grating 8 are integrated together (See fig. 1).

With respect to claim 3, Sakai et al. discloses the three-beam diffraction grating 8 is so positioned that the forward beam directed from the laser emission part toward the irradiation object is inhibited from being incident on the three-beam diffraction grating (See fig. 1).

With respect to claim 4, Sakai et al. discloses the laser reception part includes a first photoreception 82 part fro receiving a + 1^{st} –order diffracted beam

derived from the polarization hologram, and a second photoreception part 81 for receiving a -1^{st} –order diffracted beam derived from the polarization hologram 4 (See paragraph 0106).

With respect to claim 5, Sakai et al. discloses the three-beam diffraction grating 8 varies in diffraction efficiency depending on positions in a grating extension direction along which the grating extends (See paragraph 0156-0157 and figs. 7-8).

With respect to claim 6, Sakai et al. discloses the three-beam diffraction grating 8, a land width to groove width ratio of land portions and groove portions which constitute the grating continuously varies along the grating-extension direction (See figs. 7-8).

With respect to claim 7, Sakai et al. discloses the three-beam diffraction grating 8, a land width to groove depth of the grating continuously varies along the grating-extension direction (See figs. 7-8).

With respect to claim 8, Sakai et al. discloses the three-beam diffraction grating 8, a land width to groove depth of the grating varies stepwise along the grating-extension direction (See figs. 7-8)

Claim Rejections - 35 U.S.C. § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth insection 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 8 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Komma et al., (U.S. Pub. No. 2002/0097660) or Sakai et al., (U.S. Pub. No. 2004/0156299) in view of Ohuchida et al., (U.S. Patent No. 5,684,779).

Regarding claim 8, Komma et al. or Sakai et al. discloses all of the claimed limitation as expressly recited in claim 1 except a ¼ wave plate corresponding to wavelength of the laser beam. However, Ohuchida et al. discloses a ¼ wave plate 13 corresponding to wavelength of the laser beam (See fig. 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the antenna of Komma et al. or Sakai by arranging a ¼ wave plate, in lieu of one, so as to be able to convert the light into a linearly polarized light perpendicular to the emission light since such an arrangement of a ¼ wave plate for the stated purpose has been well known in the art as evidenced by the teaching of Ohuchida et al. (See column 4, line 56-58).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Vy whose telephone number is (571) 272-1954. The examiner can normally be reached on Monday-Friday 8:30 am - 5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax numbers for the organization where this application or proceeding is assigned are (571) 273 8300

Information regarding the status of an application may be obtained from the patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either private Pair or Public Pair. Status information for unpublished applications is available through Private Pair only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have question on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hung T. Vy
Art Unit 2821
August 9, 2005.

THUY V. TRAN
PRIMARY EXAMINER